The Effect of International Financial Reporting Standard (IFRS) on The Value Relevance of Intangible Asset and Goodwill

Nurina Laili and Zahroh Naimah

1Faculty of Economics and Business, Universitas Airlangga, Surabaya, Indonesia
zahrohnaimah@yahoo.com

Keywords: Accounting Earnings, Book Value, Goodwill, Intangible Asset, Market Value Of Equity, IFRS.

Abstract: This study aimed to examine the value relevance of accounting earnings, book value of equity, goodwill, and intangible asset and the effect of International Financial Reporting Standard (IFRS) on the value relevance of accounting earnings, book value of equity, goodwill, and intangible asset. The study was conducted at the manufacturing companies listed on Indonesian Stock Exchange in the period 2008-2009 and 2012-2013 with 128 companies for four years. The hypothesis is tested by regression analysis. The results show that accounting earnings, book value, and goodwill have significant effect on the market value of equity, but intangible assets do not affect market value significantly. Then, the results of IFRS as moderated variable showed that IFRS has a significant influence on the value relevance of accounting earnings, while IFRS do not affect significantly on the value relevance of book value, goodwill, and intangible asset.

1. INTRODUCTION

Indonesia has adopted International Financial Reporting Standard (IFRS) starting January 1, 2012, with the implementation of IFRS that was done gradually starting January 1, 2010. IFRS as principles-based standards can improve the value relevance of accounting information because of the use of fair value in the measurement can reflect the firm’s financial position and performance so can help investors in making investment decisions (Bart et al., 2008). Study of Ledoux and Cormier (2013) about the effect of intangible assets and goodwill on company’s market valuation with the adoption of IFRS as moderating variable in Canada, showed that the value relevance of intangible assets improved as the adoption of IAS 38: Intangible Assets. Intangible assets are an important intellectual capital components with real impact on company (Stanfield, 1999 in Soraya (2013)). One of the roles of intangible assets on the firm is the innovation of developing new technology that can help the efficiency of company’s operations. Therefore, intangible assets should also receive the attention as of tangible assets have in their process, measurement, and presentation. In Abdolmohammadi’s survey (2005), it was proven that the amount of intangible assets disclosure in annual report affects the company’s market capitalization.

The purposes of this study are two. First, to examine the value relevance of accounting earnings, book value of equity, intangible assets and goodwill. Second, to find out whether IFRS convergence affects the value relevance of accounting earnings, book value of equity, intangible assets and goodwill.

2. LITERATURE REVIEW AND HYPOTHESIS

2.1. The Value Relevance of Accounting Information

An information is relevant if it can be used by user of financial statement in making decisions. The value relevance of accounting information is usually examined by analyzing the association of accounting information, such as earnings, cash flow, accruals with market variables. (Barth et al., 1998; Burgstahler and Dichev, 1997; Collins et al., 1997;
Collins et al., 1999; Francis and Schipper, 1999; Ely and Waymire, 1999; and Ali and Hwang, 2000).

To examine that an information has value relevance, if it has a predicted relationship with market value of equity (Amir et al, 1993, Beaver, 1998). To assess whether an information is relevant and useful to users of financial statements in assessing a company, accounting information has a significant (predictable) relationship with stock prices (Barth et al, 2001).

2.1.1. The Value Relevance of Accounting Earnings

Earnings derived from the income statement is a reflection of the company’s business results in empowering its resources. Some previous studies proved that market value of equity is related to accounting earnings (Ball and Brown, 1968; Collins and Kothari 1989; Barth et al, 1992).

In simple earnings capitalization model, stock price is expressed as a function of earnings or the components of earnings under the assumption that earnings reflect information about expected future cash flows (Bowen 1981; Daley 1984; Olsen 1985; Kothari 1992; Kothari and Zimmerman 1995).

Thus the proposed hypothesis is:

H1: Accounting earnings influence market value of equity

2.1.2 The Value Relevance of Book Value of Equity

The book value of equity has a role that can not be ignored in its effect on stock prices, since the book value of equity is also a relevant factor in explaining the equity value. The previous test results on the combined earnings and book value of equity showed that accounting earnings and book value of equity have a positive effect on stock prices. Naimah and Utama (2007) summarize that testing of combined value relevance of accounting earnings and book value of equity by some researchers is much motivated by the results of Feltlham and Ohlson studies (1995, 1996) that related book value of equity and earnings with stock price, Naimah and Utama (2007) and Kusumo and Subekti (2013) concluded that main findings of that study indicated that earnings and book value of equity are significant factors affecting stock prices.

Based on the description and the results of previous research, the hypothesis that can be proposed is:

H2: The book value of equity influence market value of equity

2.1.3. The Value Relevance of Intangible Assets and Goodwill

Ledoux and Cormier (2013) research is aimed to determine whether the value relevance of intangible assets increases with the adoption of IAS 38 on Intangible Assets. The results showed that adoption of IAS 38 increases value relevance of intangible assets and decreases the value relevance of voluntary disclosure on R & D. Furthermore, in this study, accounting earnings, net book value, goodwill and intangible assets are also seen to affect the value of equity markets. Investors pay attention to cash flow generated by the company in the future related to goodwill, and also consider the book value of goodwill and intangible assets as important economic resources in determining the market value of the firm. This study have a similarity with Ledoux and Cormier (2013) research, on the use of market value of equity as a dependent variable, and accounting earnings, net book equity value, goodwill and intangible assets as independent variables. Thus the proposed hypothesis is:

H3a: Intangible assets influence market value of equity
H3b: Goodwill influence market value of equity

2.2 The Effect of IFRS on the Value Relevance of Accounting Information

IFRS as principles-based standards can further improve the value relevance of accounting information because fair value measurement can reflect the position and performance of the company so can assist investors in making investment decisions (Kusumo and Subekti, 2013). Barth et al (2006) and Amstrong et al. (2010) found that firms that applying IAS have higher accounting quality and more value relevance of accounting amount.

2.2.1. The Effect of IFRS on the Value Relevance of Accounting Earnings

Hung and Subramanyam (2007) found that IAS significantly increase the value relevance of earnings and timeliness of accounting information. Armstrong et al. (2010) found that firms that applying IAS have more value relevance of accounting amount.
Based on this, the proposed hypothesis is as follows:
1. **H4**: The implementation of IFRS affects the value relevance of accounting earnings

2.2.2. **The Effect of IFRS on the Value Relevance of Book Value of Equity**

The book value of equity per share can be interpreted as one of the proxies to calculate the value relevance of information, so that the equity value will increase in value relevance after IFRS is adopted by the company. Kusumo and Subekti (2013) showed that the value relevance of earnings did not increase when adopting IFRS but the value relevance of book value of equity is higher or increased when the company adopted IFRS. Based on the description and the results of previous research, the hypothesis that can be proposed as a temporary answer to the problem of this study are as follows.

**H5**: The implementation of IFRS affects the value relevance of book value of equity

2.2.3. **The Effect of IFRS on the Value Relevance of Intangible Asset and Goodwill**

Setijawan (2011) concludes that signal theory is influenced by intangible assets because investors perceive the existence of high intangible assets as a positive signal. Ledoux and Cormier (2013), which raise the topic of the influence of intangible assets and goodwill on corporate market valuations by IFRS adoption as a moderating variable in Canada, indicated that the value relevance of intangible asset improves as IFRS adoption of IAS 38 intangible assets. So the hypothesis that can be proposed as a temporary answer to the problems of this study are as follows.

**H6a**: The implementation of IFRS affects the value relevance of intangible assets

**H6b**: The implementation of IFRS affects the value relevance goodwill

3. **METHOD AND ANALYSIS**

The population of this research is a manufacturing company listed on Indonesia Stock Exchange (IDX) period 2008, 2009, 2012, and 2013. The sample of research is 128 companies for 4 years period of study. The research variables consist of dependent variable, independent variable, and moderating vector.

1. **Dependent variable.** The dependent variable in this study is equity market value measured by the stock price at 3 months after the end of the fiscal year, i.e. the closing price of stock in March.

2. **Independent variable.** The independent variables in this study are accounting earnings, book value of equity, intangible assets, and goodwill. The accounting earnings used in this study is earnings before extraordinary item per share. The book value per share is derived from the total equity divided by the number of outstanding shares. Goodwill using the book value of goodwill divided by the number of outstanding shares.

3. **Moderating variable.** IFRS. This study presents IFRS in the form of dummy variables, where IFRS is a categorical variable, in the regression model the variable should be expressed as dummy variable by giving code 0 (zero) or 1 (one) (Ghozali, 2013: 178).

The method of analysis used in this research is a simple linear regression method and multiple linear regression. This study examines how the influence of independent variables in which accounting earnings, book value of equity, intangible assets and goodwill to the dependent variable of equity market value with IFRS as moderating variable at manufacturing companies listed on the Stock Exchange. To see the effects of IFRS on the value relevance of accounting earnings, book value of equity, intangible assets and goodwill, use method of Moderated Regression Analysis.

This study uses six regression equations. Equation 1 (test H1) examines the value relevance of accounting earnings

\[ P = \alpha_0 + \beta_1 \text{EARN} + \epsilon \quad \text{(1)} \]

Equation 2 (test H1 and H2): test the combined value relevance of accounting earnings and book value.

\[ P = \alpha_0 + \beta_1 \text{EARN} + \beta_2 \text{EQUITY} + \epsilon \quad \text{(2)} \]

Equation 3 (test H1, H2, H3a and H3b): to test the combined value of relevance of accounting...
earnings, book value, goodwill and intangible assets, use the models referring to Ledoux and Cormier (2013) research.

\[
P = \alpha_0 + \beta_1 \text{EARN} + \beta_2 \text{EQUITY} + \beta_3 \text{GW} + \beta_4 \text{IA} + \varepsilon
\]  

(3)

From the above three equations, we get the model of interaction equation for Moderated Regression Analysis (MRA) as follows. Referring to the Ledoux and Cormier (2013) research model in testing IFRS’s impact on the value relevance of goodwill and intangible assets.

Equation 4 (testing H4):

\[
P = \alpha_8 + \beta_1 \text{EARN} + \beta_2 \text{IFRS} + \beta_3 \text{EARN} \times \text{IFRS} + \varepsilon \]  

(4)

Model 5 (testing H4 and H5):

\[
P = \alpha_8 + \beta_1 \text{EARN} + \beta_2 \text{EQUITY} + \beta_3 \text{GW} + \beta_4 \text{IA} + \beta_5 \text{EARN} \times \text{IFRS} + \beta_6 \text{EQUITY} \times \text{IFRS} + \varepsilon \]  

(5)

Model 6 (testing H4, H5, H6a and H6b):

\[
P = \alpha_8 + \beta_1 \text{EARN} + \beta_2 \text{EQUITY NET} + \beta_3 \text{GW} + \beta_4 \text{IA} + \beta_5 \text{EARN} \times \text{IFRS} + \beta_6 \text{EQUITY NET} \times \text{IFRS} + \beta_7 \text{GW} \times \text{IFRS} + \beta_8 \text{IA} \times \text{IFRS} + \varepsilon \]  

(6)

Information:

\begin{align*}
P & = \text{stock price} \\
\alpha & = \text{constants} \\
\varepsilon & = \text{the level of estimation error in the research} \\
\text{EARN} & = \text{accounting earnings} \\
\text{EQUITY} & = \text{book value of equity} \\
\text{EQUITY NET} & = \text{net book value of equity before goodwill and intangible assets} \\
\text{GW} & = \text{goodwill} \\
\text{IA} & = \text{intangible asset} \\
\text{IFRS} & = \text{International Financial Reporting Standard}
\end{align*}

4. RESULT

4.1 The Value Relevance Value of Accounting Information

4.1.1. The Value Relevance of Accounting Earnings

From the equation of the first model, it can be concluded that accounting earnings has significant influence on market value of equity, in accordance with the hypothesis. The greater the accounting earnings, the greater the company can distribute dividends, so the investors will be more interested in stock that have large accounting earnings. This research is consistent with the research of Naimah and Utama (2007), Ledoux and Cormier (2013) and Kasumo and Subekti (2013) which stated that accounting earnings is a proxy in calculating value relevance of company’s information.

4.1.2. The Value Relevance of Accounting Earnings and Book Value of Equity

From this equation, the significance value (p-value) is 0.000, it can be interpreted that accounting earnings and book value of equity jointly affect the market value of equity. Partially (t-test), accounting earnings significantly affect the market value of equity, as well as the book value of equity which has a significance value of 0.011. So it can be concluded that accounting earnings and book value of equity affect the market value of equity. This study is consistent with the first equation model that accounting earnings have a significant effect on market value of equity, as well as book value of equity which has a significant influence on market value of equity. This study is consistent with the conclusion of Naimah and Utama (2007) that accounting earnings and book value of equity are important variables for stock prices and are also consistent with Ledoux and Cormier (2013) studies that book value of equity is a proxy in assessing value relevance. This may be caused by the book value of equity that provides information on the net worth of the company’s resources.

4.1.3. The Value Relevance of Accounting Earnings, Net Book Value of Equity, Intangible Assets, and Goodwill

From the equation of the third model, the significance value is (p-value) 0.000, it can be interpreted that accounting earnings, net book value of equity, goodwill, and intangible assets jointly affect the market value of equity. Partially (t-test), accounting earnings, book value of equity, and goodwill significantly affect the market value of equity, but intangible assets do not significantly affect market value of equity. So it can be concluded that goodwill significantly affects market value of equity while intangible assets do not significantly affect the market value of equity. The equation of this research model is consistent with the first and second model which conclude that accounting
earnings and book value of equity significantly affect market value of equity.

This study is consistent with Ledoux and Cornier (2013) research that accounting earnings, net book equity value, and goodwill become proxies in determining value relevance. However, the results of this study showing intangible assets do not significantly affect stock prices inconsistent with Ledoux and Cornier (2013) in Canada. This can be explained because the information in the disclosure of intangible assets is rarely reported on the financial statements of manufacturing companies listed on the Stock Exchange.

4.2 The Effect of IFRS on the Value Relevance of Accounting Information

4.2.1 The Effect of IFRS on the Value Relevance of Accounting Earnings

Interaction variables between accounting earnings and IFRS are also called moderating variable that reflect the moderating effect of IFRS variable on the association of accounting earnings and market value of equity. If the IFRS variable is a moderating variable, then the coefficient must be significant at the specified significance level.

From the equation of the fourth model, the significance value (p-value) 0.000. It can be interpreted that the regression model can be used to predict the market value of equity, or it can be said that accounting earnings, IFRS, and interaction of earnings accounting and IFRS jointly affect market value of equity. Partially (t-test), accounting earnings significantly influences market value of equity, as well as moderating variable which is the interaction between accounting earnings and IFRS with 0.000 significance, so it can be concluded that IFRS variable is significant moderating variable. This result is consistent with the first, second, third, equation model which states that accounting earnings has value relevance.

The results of this study indicate that the implementation of IFRS affects the value relevance of accounting earnings. This result is in line with the research of Barth et al. (2006), Hung and Subramanyam (2007), and Amstrong et al. (2010) which stated the implementation of IFRS increase the accounting quality and the value relevance of accounting earnings.

4.2.2 The Effect of IFRS on Value Relevance of Accounting Earnings and Book Value of Equity

Interaction variables of IFRS with accounting earnings and book value of equity reflect the moderating effect of IFRS variable on the association of accounting earnings and book value of equity with market value of equity. If IFRS variable is a moderating variable, then the coefficient $\beta_4$ and $\beta_5$ should be significant at the specified significance level.

From the equation of the fifth model, the significance value is (p-value) 0.000, it can be interpreted that the regression model can be used to predict the market value of equity, or it can be said that accounting earnings, IFRS, book value of equity, interaction of accounting earnings and IFRS, and interaction of book value of equity and IFRS jointly affect market value of equity.

Partially (t-test), accounting earnings and book value of equity significantly affect market value of equity, as well as moderating variables which is the interaction between IFRS and accounting earnings that show significant results. However, the interaction of IFRS and book value of equity has a significance value above the specified significance value; so it can be concluded that IFRS variable is not a variable that moderate the influence of book value of equity to market value of equity. This study is inconsistent with Kusumo and Subekti (2013) which states that the value relevance of book value increases as companies adopt IFRS. This can be explained by the lack of investor confidence in the implementation of IFRS in the preparation of the financial statements and Indonesia has weak investor protection so that the convergence of IFRS has not been able to improve the value relevance of accounting information (Anas, 2014).

4.2.3 The Effect of IFRS on the Value Relevance of Accounting Earnings, Net Book Value of Equity, Intangible Assets, and Goodwill

From the equation of the sixth model, the significance value is (p-value) 0.000. It can be interpreted that the regression model can be used to predict the market value of equity, or it can be said that accounting earnings, net book equity value, goodwill, intangible assets, IFRS, interaction of IFRS and accounting earnings, interaction of IFRS and book value of equity, interaction of IFRS and
goodwill, interaction of IFRS and intangible assets jointly affect market value of equity.

Partially (t-test), accounting earnings, net book value of equity, and goodwill significantly affect market value of equity, but intangible assets do not affect market value of equity. The moderating effect of IFRS on the association of accounting earnings and market value of equity has a significant result so it can be concluded that IFRS variable is a variable that moderate the effect of accounting earnings to market value of equity. While the moderating effect of the association of goodwill and intangible assets have significance above the specified significance value, it can be concluded that IFRS does not affect the value relevance of goodwill and intangible assets. The result of this sixth equation is consistent with the first, second, third, fourth and fifth equation models that accounting earnings, book value, goodwill have value relevance and IFRS convergence affect the value relevance of accounting earnings. This study is inconsistent with previous Ledoux and Cormier (2013) research which stated that value relevance of intangible assets increases with the adoption of IFRS on intangible assets. It can be explained that research samples are in different countries and Indonesia still has weak investor protection so that the convergence of IFRS has not been able to improve the value relevance of accounting information (Anas; 2014).

5. CONCLUSIONS

Accounting earnings consistently in the first to sixth model equations has a significant influence on market value of equity. It can be explained that investors are more likely to see accounting earnings as a proxy of market value, the greater the accounting earnings the greater the company can distribute dividends so that investors are more interested companies that have large accounting earnings. The book value of equity also significantly affects the market value of equity. The book value of equity consistently in the first, second, and third model equations has a significant effect on the market value of equity. Goodwill significantly affects the market value of equity, this study is in accordance with Ledoux and Cormier (2013) studies which concluded that accounting earnings, net book value of equity, and goodwill become proxies in determining value relevance. However, intangible assets do not significantly affect the market value of equity. It can be explained that the intangible asset disclosure information is still little reported on financial statements of listed companies listed on IDX. The author also examines the effect of IFRS on the relevance of earnings, book value, goodwill and intangible assets. The results of the study suggest that the implementation of IFRS significantly affects the value relevance of accounting earnings, but the implementation of IFRS does not affect the value relevance of book value of equity, goodwill, and intangible assets in manufacturing companies listed on IDX.

REFERENCES

Cormier, Denis & Ledoux. 2013. Market Assessment of Intangibles and Voluntary Disclosure about Innovation: the Incidence of IFRS. Montreal, Canada: ESG UQAM.


156
## APPENDIX

### Tabel 1: Hasil.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Eq 1</th>
<th>Eq2</th>
<th>Eq3</th>
<th>Eq4</th>
<th>Eq5</th>
<th>Eq6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>275.290</td>
<td>675.166</td>
<td>299.636</td>
<td>217.040</td>
<td>615.716</td>
<td>-86.957</td>
</tr>
<tr>
<td></td>
<td>0.768</td>
<td>1.765</td>
<td>0.771</td>
<td>0.439</td>
<td>1.215</td>
<td>-0.170</td>
</tr>
<tr>
<td></td>
<td>0.444</td>
<td>0.080</td>
<td>0.442</td>
<td>0.661</td>
<td>0.227</td>
<td>0.866</td>
</tr>
<tr>
<td></td>
<td>28.882</td>
<td>27.367</td>
<td>27.887</td>
<td>20.906</td>
<td>20.959</td>
<td>22.892</td>
</tr>
<tr>
<td></td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>EQUITY</td>
<td>-0.528</td>
<td>-2.571</td>
<td>0.011</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EQNET</td>
<td>-0.850</td>
<td>-3.777</td>
<td>0.000</td>
<td>-0.089</td>
<td>-3.835</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-0.850</td>
<td>-3.777</td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IA</td>
<td>9.347</td>
<td>0.833</td>
<td>0.407</td>
<td>14.199</td>
<td>0.751</td>
<td>0.455</td>
</tr>
<tr>
<td>GW</td>
<td>42.777</td>
<td>2.998</td>
<td>0.003</td>
<td>49.142</td>
<td>3.637</td>
<td>0.000</td>
</tr>
<tr>
<td>IFRS</td>
<td>-107.138</td>
<td>24.080</td>
<td></td>
<td>587.042</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-0.164</td>
<td>0.036</td>
<td>0.087</td>
<td></td>
<td>0.386</td>
<td></td>
</tr>
<tr>
<td>IFRS*EARN</td>
<td>6.310</td>
<td>7.193</td>
<td>7.636</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4.895</td>
<td>5.129</td>
<td>5.580</td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>---</td>
<td>---</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>IFRS*EQUITY</td>
<td></td>
<td></td>
<td>-0.310</td>
<td>-0.922</td>
<td>0.359</td>
<td></td>
</tr>
<tr>
<td>IFRS*EQNET</td>
<td></td>
<td></td>
<td></td>
<td>-0.361</td>
<td>-0.999</td>
<td>0.320</td>
</tr>
<tr>
<td>IFRS*IA</td>
<td></td>
<td></td>
<td></td>
<td>-34.594</td>
<td>-1.526</td>
<td>0.130</td>
</tr>
<tr>
<td>IFRS*GW</td>
<td></td>
<td></td>
<td></td>
<td>35.211</td>
<td>0.914</td>
<td>0.363</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.883</td>
<td>0.887</td>
<td>0.896</td>
<td>0.903</td>
<td>0.911</td>
<td>0.923</td>
</tr>
</tbody>
</table>